ABSTRACT OF THE DISCLOSURE

Methods are described for maintaining a small bounded aggregate state within network routers pertaining to selected architectural families. Small bounded reservations states are utilized wherein the method is fully scalable for use on large

5   networks. The size of the aggregate state and the complexity of the associated refresh mechanism is determined by the parameters of the network, such as size, and classes, which is in contrast to states based on the number of end-user flows. The method can render deterministic bandwidth use within the network wherein real-time multimedia applications may be accorded strict delay and bandwidth guarantees. The invention

10   provides a middle-ground between the stateful Intserv and the stateless SCORE architectures.